



Boeing and AIT UID Program Manager Workshop May 5-6, 2005

Jeffrey Gear
Program Manager, AIT
Integrated Defense Systems
The Boeing Company
314-777-8280

AIT Strategic Focus

- Moore's Law: Computing power doubles every 18 months
- Gilder's Law: Network bandwidth capacity triples every 12 months
- Metcalfe's Law: Value of network increases exponentially as number of nodes increases

Integration across the supply chain, **Interoperability** of the technologies and **Scalability** of information are key to AIT success

Data ➡ Information ➡ Knowledge ➡ Decision



Integrated Defense Systems

AIT Status

The Team

- AIT Teams established at every major IDS site
- IDS AIT Steering Team - Leaders from each AIT site team (represent all functions)
- IDS AIT Program Office

Our Approach

- Functional collaboration across IDS, working together with Boeing Commercial, Phantom Works, and Shared Services Group
- Proactive involvement with business and program planning teams
- Support policy development and Boeing compliance
- Participate in OSD (JALC), Industry (AIA), and Standards (ISO) working groups
- The single “face” to Customers and Suppliers regarding AIT

Our Status

- Leadership established and enterprise organization in work
- Engaged with key Customer stakeholders in all aspects of AIT
 - e.g. Single Process Initiative w/DCMA for UID implementation
- Working with Boeing Commercial to coordinate and leverage strategies
- Boeing AIT Summits in Nov '04 and Apr '05



Some UID Examples within Boeing

- **Oklahoma City**
 - E-3 IDS repair – proposed in the form of MIL-STD-129P
 - B-2, Spares – proposed in the form of adding MIL-STD-129P
- **Long Beach**
 - C17 Production Contract
 - B1B Multiple Contracts
- **Philadelphia**
 - CH47F Engineering Service Task Order
 - V22 New Build, Mid/Late 2005
- **Mesa**
 - AH64 New Build, in discussion
- **Huntsville**
 - Spares - 3 active proposals with MIL-STD-130L
- **St. Louis**
 - T-45, FY05 Production Contract, Mod signed 13 Dec 04, Marking A/C only
 - F-18, Production Contract in discussion
 - AV8, Harrier Integrated Supply Support, On Contract Planned for June 05
- **Wichita**
 - KC-135 CCAB, in discussion
 - B-52 CONECT, in discussion



UID - Addressing Compliance

- We are responding to RFPs & working with our Customers to begin incorporating UID, but most contracts are in their formative state.
- Our experience in part marking and UID is based on commercial aircraft practices and early DoD development work.
- We have a standard IDS flow-down clause for UID that all sites can use with our suppliers (single “face” to our suppliers).
- We are creating the capability to utilize both Construct 1 & 2 UIDs at most sites - our suppliers or GFE providers may use a different construct than we have elected to use ourselves.
- Data constructs will vary by Boeing site. Each program will be working directly with their Customers to determine the ‘best fit’.
- We are currently in dialogue with our Customers to ensure our deployment plans will support their planned use of this data.

Supplier Flowdown Clause

Master Customer Contract Requirements (CCR):

252.211-7003 Item Identification and Valuation (JAN 2004).

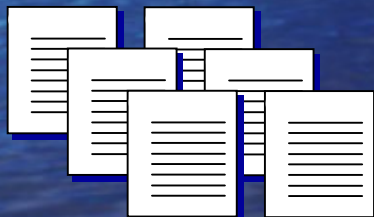
Seller shall comply with the unique item identification requirements of this clause for those subassemblies, components, and parts specified elsewhere in this contract. Such identification and marking shall be a high-capacity 2D machine readable code to comply with MIL-STD-130L. The code may include, as space is available, linear bar code and human readable characters. Unless otherwise specified in Boeing product drawings or specifications, the seller may use either Construct #1 or Construct #2. The Seller shall not be required to furnish item valuations as set forth in this clause.

Framework for UID SPI

**DCMA/IDS
Enterprise
UID SPI MOA**

- Common principles; framework for site-level SPIs
- Referenced in site-level Block Change mods

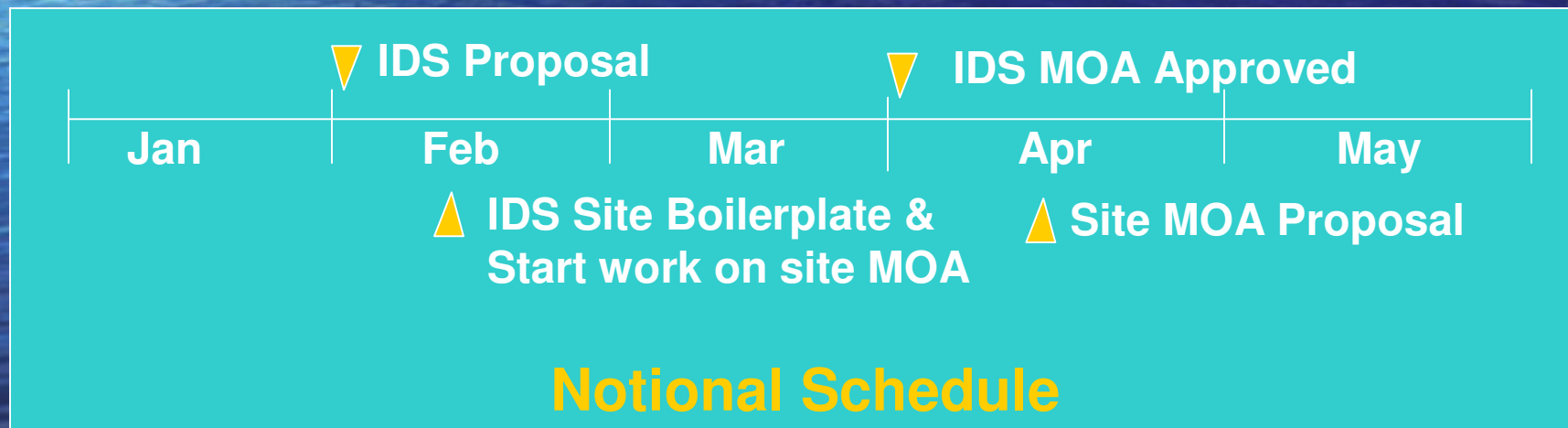
**DCMA/IDS
Site
UID SPI**



- Block Change mod incorporating DFARS clause, MIL-STD-130L/M, Special Provision tying activation of UID requirements to equitable adjustments
- Site-level implementation plan
- Service/Component customers authorize/fund UID implementation – activates above Special Provision
- CLIN/SLIN changes to itemize UID parts
- New contracts also reference SPI(s)

Single Process Initiative

- **Two Tier Process for SPI**
 - Top Level IDS Enterprise SPI (Proposal in Review)
 - Site SPI with local DCMA
 - StL AIT Program has drafted a common template
- **Product of SPI will be a MOA with the Government**



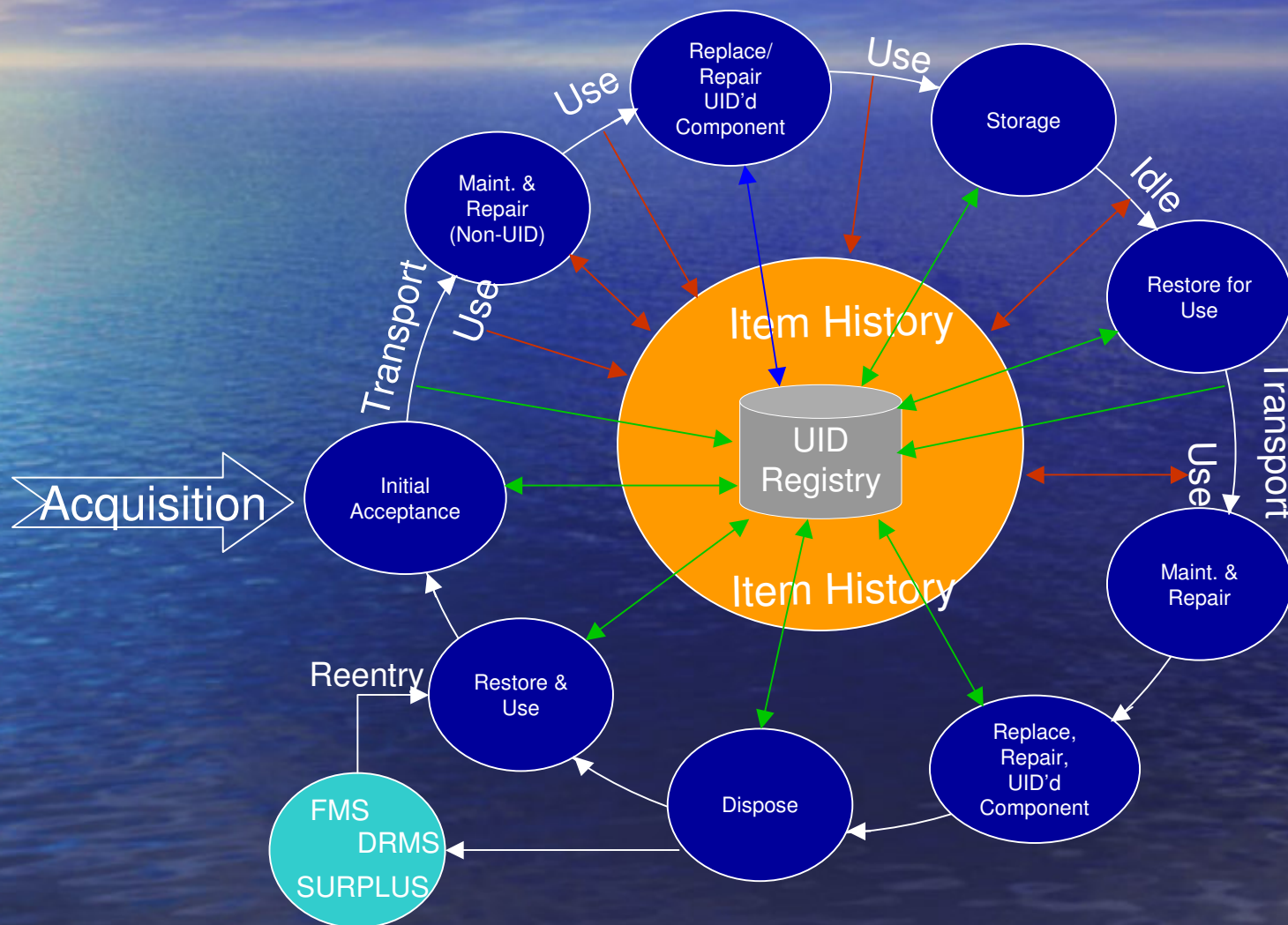
WAWF Readiness

- Working with the sites and DCMA HQ defining WAWF business rules for issues such as:
 - Direct transmission to the UID registry when required
 - RFID requirements, using the MIRR as the Advance Ship Notice (ASN)
 - DoD deliveries using delivery documents other than MIRR
 - WAWF handling of multiple part numbers per CLIN
 - Transmitting fully concatenated UID to WAWF

**Rules must be defined to ensure
flawless transmission to WAWF**



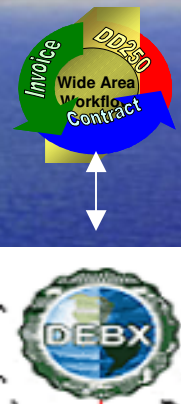
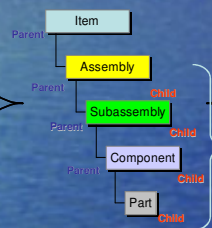
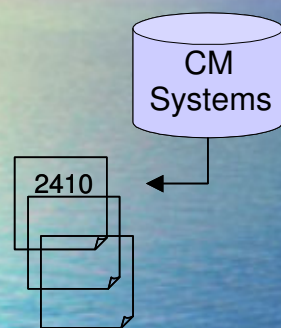
Item Lifecycle



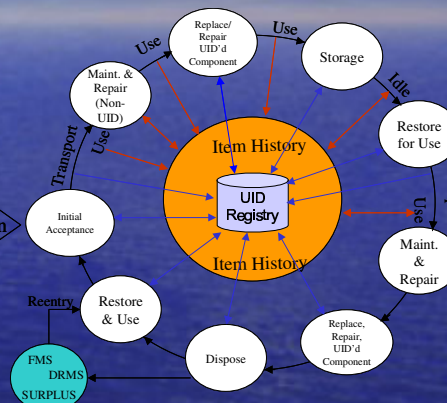


PLCS/UID Vision

UID Data Elements in Systems



UID in Operational Use



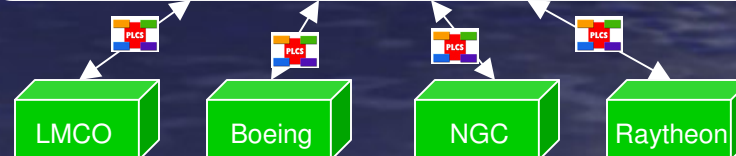
DoD



Other Gov'ts



Industry



Opportunistic Parts Marking

- This evolution in Automatic Identification Technology (AIT)
 - Satisfies DoD requirement for marking unique identifiers on parts
 - 2-D symbology dramatically improves the ability to identify, track and manage parts
- Strong IP Position
 - System, method & computer program patent 6,799,187
 - S/W & Know How
- Growth Potential
 - Potential to integrate with OEM systems





Backup

SPI Top-Level MOA

- **Common principles for UID implementation across IDS:**
 - Site leadership and DCMA resident offices will develop site-specific implementation plans
 - Contractor (by site) selects MIL-STD-compliant UID Construct; respects supplier/subcontractor/IWA choices
 - DCMA and site/program leadership work together with program customers re any equitable adjustments for nonrecurring costs, potential patent issues, and with DCMA-HQ re WAWF enhancements for UID
 - Acquisition of general purpose marking/reading equipment and IT system enhancements for UID will typically be treated per existing ABU accounting disclosure statement(s)
 - Estimating techniques (options) for development of Government Unit Acquisition Cost (GUAC) values under cost-type contracts

Site-level SPI Mod

- **Contract mod covering site's DoD contracts:**
 - **Invokes IDS-level UID SPI MOA principles**
 - **Invokes site-level UID implementation plan**
 - **Incorporates DFARS (interim or final) UID clause, MIL-STD-130L (M?) and related requirements, and a Special Provision regarding activation of UID requirements that:**
 - **Ties activation to execution of site level UID implementation plan**
 - **Ties to funding (if required) of nonrecurring implementation cost**
 - **Invokes DCMA authority to extend (partially waive) applicability of UID requirements consistent with the implementation plan**
 - **Provides authorization and consent to use of possibly patented 2-D matrix barcode format mandated by DoD UID policy**
 - **Coordinated with affected program customers for concurrent modification of individual contracts to specify items (including those <\$5K or embedded) that require UID**